

Natalie Davis

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/670,568B

DATE: 07/24/2001

TIME: 13:21:03

Input Set : A:\Q61014 Sequence Listing.txt

Output Set: N:\CRF3\07242001\I670568B.raw

ENTERED

```

3 <110> APPLICANT: Otsuka Pharmaceutical Co., Ltd.
5 <120> TITLE OF INVENTION: HUMAN P51 GENES AND GENE PRODUCTS THEREOF
7 <130> FILE REFERENCE: Q61014
9 <140> CURRENT APPLICATION NUMBER: 09/670,568B
10 <141> CURRENT FILING DATE: 2000-09-27
12 <150> PRIOR APPLICATION NUMBER: JP 10-100467
13 <151> PRIOR FILING DATE: 1998-03-27
15 <160> NUMBER OF SEQ ID NOS: 23
17 <170> SOFTWARE: PatentIn version 3.1
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 448
21 <212> TYPE: PRT
22 <213> ORGANISM: Homo sapiens
24 <220> FEATURE:
25 <221> NAME/KEY: DOMAIN
26 <222> LOCATION: (1)..(59)
27 <223> OTHER INFORMATION: transactivation domain
30 <220> FEATURE:
31 <221> NAME/KEY: DNA_BIND
32 <222> LOCATION: (142)..(321)
33 <223> OTHER INFORMATION: DNA binding domain
36 <220> FEATURE:
37 <221> NAME/KEY: DOMAIN
38 <222> LOCATION: (353)..(397)
39 <223> OTHER INFORMATION: oligomerization domain
42 <400> SEQUENCE: 1
44 Met Ser Gln Ser Thr Gln Thr Asn Glu Phe Leu Ser Pro Glu Val Phe
45 1 5 10 15
48 Gln His Ile Trp Asp Phe Leu Glu Gln Pro Ile Cys Ser Val Gln Pro
49 20 25 30
52 Ile Asp Leu Asn Phe Val Asp Glu Pro Ser Glu Asp Gly Ala Thr Asn
53 35 40 45
56 Lys Ile Glu Ile Ser Met Asp Cys Ile Arg Met Gln Asp Ser Asp Leu
57 50 55 60
60 Ser Asp Pro Met Trp Pro Gln Tyr Thr Asn Leu Gly Leu Leu Asn Ser
61 65 70 75 80
64 Met Asp Gln Gln Ile Gln Asn Gly Ser Ser Ser Thr Ser Pro Tyr Asn
65 85 90 95
68 Thr Asp His Ala Gln Asn Ser Val Thr Ala Pro Ser Pro Tyr Ala Gln
69 100 105 110
72 Pro Ser Ser Thr Phe Asp Ala Leu Ser Pro Ser Pro Ala Ile Pro Ser
73 115 120 125
76 Asn Thr Asp Tyr Pro Gly Pro His Ser Phe Asp Val Ser Phe Gln Gln
77 130 135 140
80 Ser Ser Thr Ala Lys Ser Ala Thr Trp Thr Tyr Ser Thr Glu Leu Lys
81 145 150 155 160
84 Lys Leu Tyr Cys Gln Ile Ala Lys Thr Cys Pro Ile Gln Ile Lys Val

```

RAW SEQUENCE LISTING

DATE: 07/24/2001

PATENT APPLICATION: US/09/670,568B

TIME: 13:21:03

Input Set : A:\Q61014 Sequence Listing.txt

Output Set: N:\CRF3\07242001\I670568B.raw

```

85          165          170          175
88 Met Thr Pro Pro Gln Gly Ala Val Ile Arg Ala Met Pro Val Tyr
89          180          185          190
92 Lys Lys Ala Glu His Val Thr Glu Val Val Lys Arg Cys Pro Asn His
93          195          200          205
96 Glu Leu Ser Arg Glu Phe Asn Glu Gly Gln Ile Ala Pro Pro Ser His
97          210          215          220
100 Leu Ile Arg Val Glu Gly Asn Ser His Ala Gln Tyr Val Glu Asp Pro
101 225          230          235          240
104 Ile Thr Gly Arg Gln Ser Val Leu Val Pro Tyr Glu Pro Pro Gln Val
105          245          250          255
108 Gly Thr Glu Phe Thr Thr Val Leu Tyr Asn Phe Met Cys Asn Ser Ser
109          260          265          270
112 Cys Val Gly Gly Met Asn Arg Arg Pro Ile Leu Ile Ile Val Thr Leu
113          275          280          285
116 Glu Thr Arg Asp Gly Gln Val Leu Gly Arg Arg Cys Phe Glu Ala Arg
117          290          295          300
120 Ile Cys Ala Cys Pro Gly Arg Asp Arg Lys Ala Asp Glu Asp Ser Ile
121 305          310          315          320
124 Arg Lys Gln Gln Val Ser Asp Ser Thr Lys Asn Gly Asp Gly Thr Lys
125          325          330          335
128 Arg Pro Phe Arg Gln Asn Thr His Gly Ile Gln Met Thr Ser Ile Lys
129          340          345          350
132 Lys Arg Arg Ser Pro Asp Asp Glu Leu Leu Tyr Leu Pro Val Arg Gly
133          355          360          365
136 Arg Glu Thr Tyr Glu Met Leu Leu Lys Ile Lys Glu Ser Leu Glu Leu
137          370          375          380
140 Met Gln Tyr Leu Pro Gln His Thr Ile Glu Thr Tyr Arg Gln Gln Gln
141 385          390          395          400
144 Gln Gln Gln His Gln His Leu Leu Gln Lys His Leu Leu Ser Ala Cys
145          405          410          415
148 Phe Arg Asn Glu Leu Val Glu Pro Arg Arg Glu Thr Pro Lys Gln Ser
149          420          425          430
152 Asp Val Phe Phe Arg His Ser Lys Pro Pro Asn Arg Ser Val Tyr Pro
153          435          440          445
156 <210> SEQ ID NO: 2
157 <211> LENGTH: 2816
158 <212> TYPE: DNA
159 <213> ORGANISM: Homo sapiens
161 <220> FEATURE:
162 <221> NAME/KEY: exon
163 <222> LOCATION: (145)..(1488)
164 <223> OTHER INFORMATION:
167 <220> FEATURE:
168 <221> NAME/KEY: polyA_signal
169 <222> LOCATION: (2786)..(2791)
170 <223> OTHER INFORMATION:
173 <400> SEQUENCE: 2
174 tcgttgatat caaagacagt tgaaggaaat gaattttgaa acttcacggt gtgccaccct

```

60

RAW SEQUENCE LISTING

DATE: 07/24/2001

PATENT APPLICATION: US/09/670,568B

TIME: 13:21:03

Input Set : A:\Q61014 Sequence Listing.txt

Output Set: N:\CRF3\07242001\I670568B.raw

```

176 acagtactgc cctgaccott acatccagcg tttcgtagaa acccagctca tttctcttgg 120
178 aaagaaagtt attaccgate cacc atg tcc cag agc aca cag aca aat gaa 171
179                               Met Ser Gln Ser Thr Gln Thr Asn Glu
180                               1                               5
182 ttc ctc agt cca gag gtt ttc cag cat atc tgg gat ttt ctg gaa cag 219
183 Phe Leu Ser Pro Glu Val Phe Gln His Ile Trp Asp Phe Leu Glu Gln
184 10                               15                               20                               25
186 cct ata tgt tca gtt cag ccc att gac ttg aac ttt gtg gat gaa cca 267
187 Pro Ile Cys Ser Val Gln Pro Ile Asp Leu Asn Phe Val Asp Glu Pro
188                               30                               35                               40
190 tca gaa gat ggt gcg aca aac aag att gag att agc atg gac tgt atc 315
191 Ser Glu Asp Gly Ala Thr Asn Lys Ile Glu Ile Ser Met Asp Cys Ile
192                               45                               50                               55
194 cgc atg cag gac tcg gac ctg agt gac ccc atg tgg cca cag tac acg 363
195 Arg Met Gln Asp Ser Asp Leu Ser Asp Pro Met Trp Pro Gln Tyr Thr
196                               60                               65                               70
198 aac ctg ggg ctc ctg aac agc atg gac cag cag att cag aac ggc tcc 411
199 Asn Leu Gly Leu Leu Asn Ser Met Asp Gln Gln Ile Gln Asn Gly Ser
200                               75                               80                               85
202 tcg tcc acc agt ccc tat aac aca gac cac gcg cag aac agc gtc acg 459
203 Ser Ser Thr Ser Pro Tyr Asn Thr Asp His Ala Gln Asn Ser Val Thr
204 90                               95                               100                               105
206 gcg ccc tcg ccc tac gca cag ccc agc tcc acc ttc gat gct ctc tct 507
207 Ala Pro Ser Pro Tyr Ala Gln Pro Ser Ser Thr Phe Asp Ala Leu Ser
208                               110                               115                               120
210 cca tca ccc gcc atc ccc tcc aac acc gac tac cca ggc ccg cac agt 555
211 Pro Ser Pro Ala Ile Pro Ser Asn Thr Asp Tyr Pro Gly Pro His Ser
212                               125                               130                               135
214 ttc gac gtg tcc ttc cag cag tcg agc acc gcc aag tcg gcc acc tgg 603
215 Phe Asp Val Ser Phe Gln Gln Ser Ser Thr Ala Lys Ser Ala Thr Trp
216                               140                               145                               150
218 acg tat tcc act gaa ctg aag aaa ctc tac tgc caa att gca aag aca 651
219 Thr Tyr Ser Thr Glu Leu Lys Lys Leu Tyr Cys Gln Ile Ala Lys Thr
220                               155                               160                               165
222 tgc ccc atc cag atc aag gtg atg acc cca cct cct cag gga gct gtt 699
223 Cys Pro Ile Gln Ile Lys Val Met Thr Pro Pro Pro Gln Gly Ala Val
224 170                               175                               180                               185
226 atc cgc gcc atg cct gtc tac aaa aaa gct gag cac gtc acg gag gtg 747
227 Ile Arg Ala Met Pro Val Tyr Lys Lys Ala Glu His Val Thr Glu Val
228                               190                               195                               200
230 gtg aag cgg tgc ccc aac cat gag ctg agc cgt gaa ttc aac gag gga 795
231 Val Lys Arg Cys Pro Asn His Glu Leu Ser Arg Glu Phe Asn Glu Gly
232                               205                               210                               215
234 cag att gcc cct cct agt cat ttg att cga gta gag ggg aac agc cat 843
235 Gln Ile Ala Pro Pro Ser His Leu Ile Arg Val Glu Gly Asn Ser His
236                               220                               225                               230
238 gcc cag tat gta gaa gat ccc atc aca gga aga cag agt gtg ctg gta 891
239 Ala Gln Tyr Val Glu Asp Pro Ile Thr Gly Arg Gln Ser Val Leu Val
240                               235                               240                               245

```

RAW SEQUENCE LISTING

DATE: 07/24/2001

PATENT APPLICATION: US/09/670,568B

TIME: 13:21:03

Input Set : A:\Q61014 Sequence Listing.txt

Output Set: N:\CRF3\07242001\I670568B.raw

```

242 cct tat gag cca ccc cag gtt ggc act gaa ttc acg aca gtc ttg tac      939
243 Pro Tyr Glu Pro Pro Gln Val Gly Thr Glu Phe Thr Thr Val Leu Tyr
244 250      255      260      265
246 aat ttc atg tgt aac agc agt tgt gtt gga ggg atg aac cgc cgt cca      987
247 Asn Phe Met Cys Asn Ser Ser Cys Val Gly Gly Met Asn Arg Arg Pro
248      270      275      280
250 att tta atc att gtt act ctg gaa acc aga gat ggg caa gtc ctg ggc      1035
251 Ile Leu Ile Ile Val Thr Leu Glu Thr Arg Asp Gly Gln Val Leu Gly
252      285      290      295
254 cga cgc tgc ttt gag gcc cgg atc tgt gct tgc cca gga aga gac agg      1083
255 Arg Arg Cys Phe Glu Ala Arg Ile Cys Ala Cys Pro Gly Arg Asp Arg
256      300      305      310
258 aag gcg gat gaa gat agc atc aga aag cag caa gtt tcg gac agt aca      1131
259 Lys Ala Asp Glu Asp Ser Ile Arg Lys Gln Gln Val Ser Asp Ser Thr
260      315      320      325
262 aag aac ggt gat ggt acg aag cgc ccg ttt cgt cag aac aca cat ggt      1179
263 Lys Asn Gly Asp Gly Thr Lys Arg Pro Phe Arg Gln Asn Thr His Gly
264 330      335      340      345
266 atc cag atg aca tcc atc aag aaa cga aga tcc cca gat gat gaa ctg      1227
267 Ile Gln Met Thr Ser Ile Lys Lys Arg Arg Ser Pro Asp Asp Glu Leu
268      350      355      360
270 tta tac tta cca gtg agg ggc cgt gag act tat gaa atg ctg ttg aag      1275
271 Leu Tyr Leu Pro Val Arg Gly Arg Glu Thr Tyr Glu Met Leu Leu Lys
272      365      370      375
274 atc aaa gag tcc ctg gaa ctc atg cag tac ctt cct cag cac aca att      1323
275 Ile Lys Glu Ser Leu Glu Leu Met Gln Tyr Leu Pro Gln His Thr Ile
276      380      385      390
278 gaa acg tac agg caa cag caa cag cag cag cac cag cac tta ctt cag      1371
279 Glu Thr Tyr Arg Gln Gln Gln Gln Gln Gln His Gln His Leu Leu Gln
280      395      400      405
282 aaa cat ctc ctt tca gcc tgc ttc agg aat gag ctt gtg gag ccc cgg      1419
283 Lys His Leu Leu Ser Ala Cys Phe Arg Asn Glu Leu Val Glu Pro Arg
284 410      415      420      425
286 aga gaa act cca aaa caa tct gac gtc ttc ttt aga cat tcc aag ccc      1467
287 Arg Glu Thr Pro Lys Gln Ser Asp Val Phe Phe Arg His Ser Lys Pro
288      430      435      440
290 cca aac cga tca gtg tac cca tagagcccta tctctatatt ttaagtgtgt      1518
291 Pro Asn Arg Ser Val Tyr Pro
292      445
294 gtgttgtatt tccatgtgta tatgtgagtg tgtgtgtgtg tatgtgtgtg cgtgtgtatc      1578
296 tagccctcat aaacaggact tgaagacact ttggctcaga gacccaactg ctcaaaggca      1638
298 caaagccact agtgagagaa tcttttgaag ggactcaaac ctttacaaga aaggatgttt      1698
300 tctgcagatt ttgtatcctt agaccggcca ttggtgggtg aggaaccact gtgtttgtct      1758
302 gtgagctttc tgttgtttcc tgggagggag gggtcagggtg gggaaagggg cattaagatg      1818
304 tttattggaa cccttttctg tcttcttctg ttgtttttct aaaattcaca gggaagcttt      1878
306 tgagcaggtc tcaaacttaa gatgtctttt taagaaaagg agaaaaaagt tgttattgtc      1938
308 tgtgcataag taagtgttag gtgactgaga gactcagtc gaccctttta atgctgtgtc      1998
310 tgtaataata ttgcaagtag taagaaacga aggtgtcaag tgtactgctg ggcagcgagg      2058
312 tgatcattac caaaagtaat caactttgtg ggtggagagt tctttgtgag aacttgcatt      2118

```

RAW SEQUENCE LISTING

DATE: 07/24/2001

PATENT APPLICATION: US/09/670,568B

TIME: 13:21:03

Input Set : A:\Q61014 Sequence Listing.txt

Output Set: N:\CRF3\07242001\I670568B.raw

```

314 atttgtgtcc tcccccatg tgtaggtaga acattttctta atgctgtgta cctgcctctg 2178
316 ccactgtatg ttggcatctg ttatgctaaa gtttttcttg tacatgaaac cctggaagac 2238
318 ctactacaaa aaaactgttg tttggccccc atagcagggtg aactcatttt gtgcttttaa 2298
320 tagaaagaca aatccacccc agtaatatgg cccttacgta gttgtttacc attattcaaa 2358
322 gctcaaaata gaatttgaag ccctctcaca aaatctgtga ttaatttgct taattagagc 2418
324 ttctatccct caagcctacc taccataaaa ccagccatat tactgatact gttcagtgca 2478
326 tttagccagg agacttacgt tttgagtaag tgagatccaa gcagacgtgt taaaatcagc 2538
328 actcctggac tggaaattaa agattgaaag ggtagactac ttttcttttt tttactcaaa 2598
330 agtttagaga atctctgttt.ctttccattt taaaaacata ttttaagata atagcataaa 2658
332 gactttaaaa atgttctctc cctccatctt cccacaccca gtcaccagca ctgtattttc 2718
334 tgtcaccaag acaatgattt cttgttattg aggctgttgc ttttgtggat gtgtgatttt 2778
336 aattttcaat aaacttttgc atcttggttt aaaagaaa 2816
339 <210> SEQ ID NO: 3
340 <211> LENGTH: 448
341 <212> TYPE: PRT
342 <213> ORGANISM: Homo sapiens
344 <400> SEQUENCE: 3
346 Met Ser Gln Ser Thr Gln Thr Asn Glu Phe Leu Ser Pro Glu Val Phe
347 1 5 10 15
350 Gln His Ile Trp Asp Phe Leu Glu Gln Pro Ile Cys Ser Val Gln Pro
351 20 25 30
354 Ile Asp Leu Asn Phe Val Asp Glu Pro Ser Glu Asp Gly Ala Thr Asn
355 35 40 45
358 Lys Ile Glu Ile Ser Met Asp Cys Ile Arg Met Gln Asp Ser Asp Leu
359 50 55 60
362 Ser Asp Pro Met Trp Pro Gln Tyr Thr Asn Leu Gly Leu Leu Asn Ser
363 65 70 75 80
366 Met Asp Gln Gln Ile Gln Asn Gly Ser Ser Ser Thr Ser Pro Tyr Asn
367 85 90 95
370 Thr Asp His Ala Gln Asn Ser Val Thr Ala Pro Ser Pro Tyr Ala Gln
371 100 105 110
374 Pro Ser Ser Thr Phe Asp Ala Leu Ser Pro Ser Pro Ala Ile Pro Ser
375 115 120 125
378 Asn Thr Asp Tyr Pro Gly Pro His Ser Phe Asp Val Ser Phe Gln Gln
379 130 135 140
382 Ser Ser Thr Ala Lys Ser Ala Thr Trp Thr Tyr Ser Thr Glu Leu Lys
383 145 150 155 160
386 Lys Leu Tyr Cys Gln Ile Ala Lys Thr Cys Pro Ile Gln Ile Lys Val
387 165 170 175
390 Met Thr Pro Pro Gln Gly Ala Val Ile Arg Ala Met Pro Val Tyr
391 180 185 190
394 Lys Lys Ala Glu His Val Thr Glu Val Val Lys Arg Cys Pro Asn His
395 195 200 205
398 Glu Leu Ser Arg Glu Phe Asn Glu Gly Gln Ile Ala Pro Pro Ser His
399 210 215 220
402 Leu Ile Arg Val Glu Gly Asn Ser His Ala Gln Tyr Val Glu Asp Pro
403 225 230 235 240
406 Ile Thr Gly Arg Gln Ser Val Leu Val Pro Tyr Glu Pro Pro Gln Val
407 245 250 255

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/670,568B

DATE: 07/24/2001

TIME: 13:21:04

Input Set : A:\Q61014 Sequence Listing.txt

Output Set: N:\CRF3\07242001\I670568B.raw